

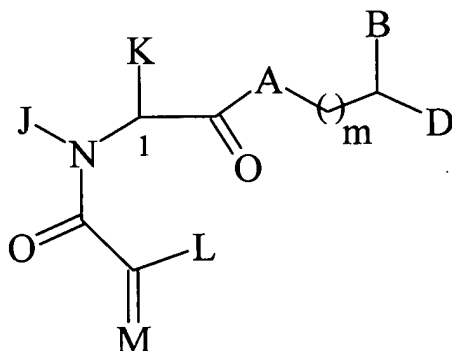
IN THE CLAIMS

Please cancel claims 1-4, which were allowed, as amended, in U.S. Patent Application Serial No. 09/089,373. Please cancel claim 7 without prejudice or disclaimer of the subject matter therein.

Please amend the claims as follows:

5. (Once amended) A pharmaceutical composition which comprises:

- (i) an effective amount of a compound [pipecolic acid derivative] for treating alopecia or promoting hair growth in an animal in need thereof, wherein said compound is [the pipecolic acid derivative is a compound] of formula I



or a pharmaceutically acceptable salt, ester, or solvate thereof, wherein:

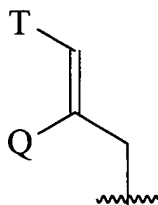
A is [CH<sub>2</sub>,] O, NH, or N-(C<sub>1</sub>-C<sub>4</sub> alkyl);

B and D are independently Ar, C<sub>5</sub>-C<sub>7</sub> cycloalkyl substituted C<sub>1</sub>-C<sub>6</sub>

straight or branched chain alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, C<sub>5</sub>-C<sub>7</sub> cycloalkenyl substituted C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, or Ar substituted C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl,

wherein in each case, one or two carbon atom(s) of said alkyl or alkenyl [may be] is/are optionally substituted with one or two heteroatom(s) independently selected from the group consisting of oxygen, sulfur, SO, and SO<sub>2</sub> [in chemically reasonable substitution patterns],

or B and D are independently the fragment



wherein Q is hydrogen, C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl; and

T is Ar or C<sub>5</sub>-C<sub>7</sub> cycloalkyl substituted at positions 3 and 4 with substituents independently selected from the group consisting of hydrogen, hydroxy, O-(C<sub>1</sub>-C<sub>4</sub> alkyl), O-(C<sub>2</sub>-C<sub>4</sub> alkenyl), and carbonyl;

Ar is selected from the group consisting of 1-naphthyl, 2-

napthyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl and phenyl, monocyclic and bicyclic heterocyclic ring systems with individual ring sizes being 5 or 6 which [contain] have in either or both rings a total of 1-4 heteroatoms independently selected from oxygen, nitrogen and sulfur, [;]

wherein Ar [contains] has 1-3 substituent(s) independently selected from the group consisting of hydrogen, halo, hydroxy, hydroxymethyl, nitro, CF<sub>3</sub>, trifluoromethoxy, C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl, C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, O-(C<sub>1</sub>-C<sub>4</sub> straight or branched chain alkyl), O-(C<sub>2</sub>-C<sub>4</sub> straight or branched chain alkenyl), O-benzyl, O-phenyl, amino, 1,2-methylenedioxy, carbonyl, and phenyl;

L is either hydrogen or U; M is either oxygen or CH-U, provided that if L is hydrogen, then M is CH-U, or if M is oxygen then L is U;

U is hydrogen, O-(C<sub>1</sub>-C<sub>4</sub> straight or branched chain alkyl), O-(C<sub>2</sub>-C<sub>4</sub> straight or branched chain alkenyl), C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl, C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, C<sub>5</sub>-C<sub>7</sub> cycloalkyl, C<sub>5</sub>-C<sub>7</sub> cycloalkenyl substituted with C<sub>1</sub>-C<sub>4</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>4</sub> straight or branched chain alkenyl, (C<sub>1</sub>-C<sub>4</sub> alkyl or C<sub>2</sub>-C<sub>4</sub> alkenyl)-Ar, or Ar;

J is hydrogen, C<sub>1</sub> or C<sub>2</sub> alkyl, or benzyl; K is C<sub>1</sub>-C<sub>4</sub> straight

or branched chain alkyl, benzyl or cyclohexylmethyl; or J and K are  
taken together to form a [5-] 7 membered heterocyclic ring which is  
substituted with oxygen, sulfur, SO, or SO<sub>2</sub>;

[n] m is 0-3; and

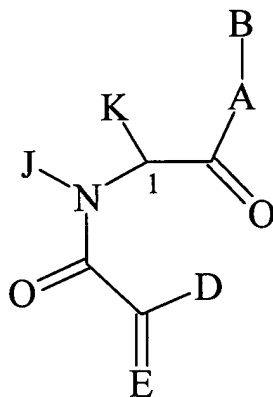
said [pipecolic acid derivative] compound has an affinity for  
FKBP-type immunophilins; [and]

(ii) a second hair revitalizing agent; and

(iii) a pharmaceutically acceptable carrier.

6. (Once amended) A pharmaceutical composition which  
comprises:

- (i) an effective amount of a compound [pipecolic acid  
derivative] for treating alopecia or promoting hair  
growth in an animal in need thereof, wherein said  
compound is [the pipecolic acid derivative is a compound]  
of formula II

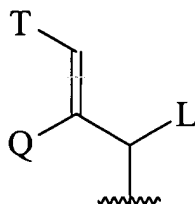


II

or a pharmaceutically acceptable salt, ester, or solvate thereof,  
wherein:

A is O, NH, or N-(C<sub>1</sub>-C<sub>4</sub> alkyl);

B is hydrogen, CHL-Ar, C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl,  
C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, C<sub>5</sub>-C<sub>7</sub> cycloalkyl, C<sub>5</sub>-C<sub>7</sub>  
cycloalkenyl, Ar substituted C<sub>1</sub>-C<sub>6</sub> alkyl or C<sub>2</sub>-C<sub>6</sub> alkenyl, or



wherein L and Q are independently hydrogen, C<sub>1</sub>-C<sub>6</sub>  
straight or branched chain alkyl, or C<sub>2</sub>-C<sub>6</sub> straight or  
branched chain alkenyl; and

T is Ar or C<sub>5</sub>-C<sub>7</sub> cyclohexyl substituted at positions  
3 and 4 with substituents independently selected from the  
group consisting of hydrogen, hydroxy, O-(C<sub>1</sub>-C<sub>4</sub> alkyl),  
O-(C<sub>2</sub>-C<sub>4</sub> alkenyl), and carbonyl;

Ar is selected from the group consisting of 1-  
naphthyl, 2-naphthyl, 2-furyl, 3-furyl, 2-thienyl, 2-  
pyridyl, 3-pyridyl, 4-pyridyl, and phenyl, having 1-3  
substituent(s) independently selected from the group  
consisting of hydrogen, halo, hydroxy, nitro, CF<sub>3</sub>, C<sub>1</sub>-C<sub>6</sub>  
straight or branched chain alkyl, C<sub>2</sub>-C<sub>6</sub> straight or  
branched chain alkenyl, O-(C<sub>1</sub>-C<sub>4</sub> straight or branched

chain alkyl), O-(C<sub>2</sub>-C<sub>4</sub> straight or branched chain alkenyl), O-benzyl, O-phenyl, amino, and phenyl; [.]

D is hydrogen or U; E is oxygen or CH-U, provided that if D is hydrogen, then E is CH-U, or if E is oxygen, then D is U;

U is hydrogen, O-(C<sub>1</sub>-C<sub>4</sub> straight or branched chain alkyl), O-(C<sub>2</sub>-C<sub>4</sub> straight or branched chain alkenyl), C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl, C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, C<sub>5</sub>-C<sub>7</sub>-cycloalkyl, C<sub>5</sub>-C<sub>7</sub> cycloalkenyl substituted with C<sub>1</sub>-C<sub>4</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>4</sub> straight or branched chain alkenyl, 2-indolyl, 3-indolyl, (C<sub>1</sub>-C<sub>4</sub> alkyl or C<sub>2</sub>-C<sub>4</sub> alkenyl)-Ar, or Ar;

J is hydrogen, C<sub>1</sub> or C<sub>2</sub> alkyl, or benzyl; K is C<sub>1</sub>-C<sub>4</sub> straight or branched chain alkyl, benzyl or cyclohexylethyl; or J and K are taken together to form a [5-] 7 membered heterocyclic ring which is substituted with oxygen, sulfur, SO, or SO<sub>2</sub>; and

said compound has an affinity for FKBP-type immunophilins;

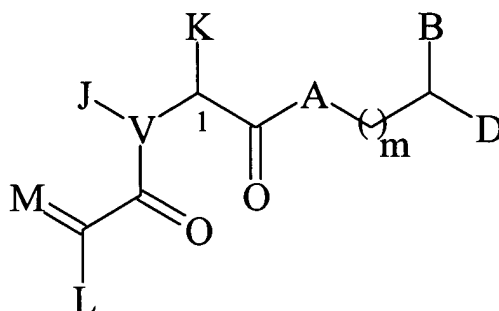
(ii) a second hair revitalizing agent; and

(iii) a pharmaceutically acceptable carrier.

8. (Once amended) A pharmaceutical composition which comprises:

- (i) an effective amount of a compound [pipecolic acid derivative] for treating alopecia or promoting hair growth in an animal in need thereof, wherein said

compound is [the pipecolic acid derivative is a compound]  
of [formula] formula IV



IV

or a pharmaceutically acceptable salt, ester, or solvate thereof,

wherein:

V is C, N, or S;

J and K, taken together with V and the carbon atom to which they are respectively attached, form a [5-] 7 membered saturated or unsaturated heterocyclic ring [containing] having, in addition to V, one or more heteroatom(s) selected from the group consisting of O, S, SO, SO<sub>2</sub>, N, NH, and NR;

R is either C<sub>1</sub>-C<sub>9</sub> straight or branched chain alkyl, C<sub>2</sub>-C<sub>9</sub> straight or branched chain alkenyl, C<sub>3</sub>-C<sub>9</sub> cycloalkyl [cycloalkyl], C<sub>5</sub>-C<sub>7</sub> cycloalkenyl, or Ar<sub>1</sub>,

wherein R is either unsubstituted or substituted with one or more substituent(s) independently selected from the group consisting of halo, haloalkyl, carbonyl, carboxy, hydroxy, nitro, trifluoromethyl, C<sub>1</sub>-C<sub>6</sub> straight or

branched chain alkyl, C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>2</sub>-C<sub>4</sub> alkenyloxy, phenoxy, benzyloxy, thioalkyl, alkylthio, sulfhydryl, amino, alkylamino, aminoalkyl, aminocarboxyl, and Ar<sub>2</sub>;

Ar<sub>1</sub> and Ar<sub>2</sub> are independently an alicyclic or aromatic, mono-, bi- or tricyclic, carbo- or heterocyclic ring<sub>L</sub> [;]

wherein the individual ring size is 5-8 members<sub>L</sub> [;]

wherein said heterocyclic ring has [contains] 1-6 heteroatom(s) independently selected from the group consisting of O, N, and S;

[A, B, D, L, M, and m are as defined in claim 5 above;]

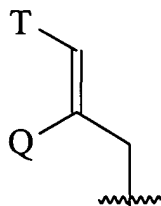
A is O, NH, or N-(C<sub>1</sub>-C<sub>4</sub> alkyl);

B and D are independently Ar, C<sub>5</sub>-C<sub>7</sub> cycloalkyl substituted C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, C<sub>5</sub>-C<sub>7</sub> cycloalkenyl substituted C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, or Ar substituted C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl,

wherein in each case, one or two carbon atom(s) of said alkyl or alkenyl is/are optionally substituted with one or two heteroatom(s) independently selected from the group consisting of oxygen, sulfur, SO, and SO<sub>2</sub>.

or B and D are independently the fragment





wherein Q is hydrogen, C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl or C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl; and

T is Ar or C<sub>5</sub>-C<sub>7</sub> cycloalkyl substituted at positions 3 and 4 with substituents independently selected from the group consisting of hydrogen, hydroxy, O-(C<sub>1</sub>-C<sub>4</sub> alkyl), O-(C<sub>2</sub>-C<sub>4</sub> alkenyl), and carbonyl;

Ar is selected from the group consisting of 1-naphthyl, 2-naphthyl, 2-furyl, 3-furyl, 2-thienyl, 3-thienyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, phenyl, and monocyclic and bicyclic heterocyclic ring systems with individual ring sizes being 5 or 6, which have in either or both rings a total of 1-4 heteroatoms independently selected from oxygen, nitrogen and sulfur,

wherein Ar has 1-3 substituent(s) independently selected from the group consisting of hydrogen, halo, hydroxy, hydroxymethyl, nitro, CF<sub>3</sub>, trifluoromethoxy, C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl, C<sub>2</sub>-C<sub>6</sub> straight or branched chain alkenyl, O-(C<sub>1</sub>-C<sub>4</sub> straight or branched chain alkyl), O-(C<sub>2</sub>-C<sub>4</sub> straight or branched chain